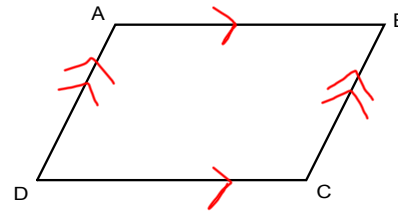


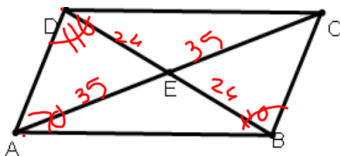
6.2 Parallelograms

Parallelogram--A quadrilateral with both pairs of opposite sides parallel.



$\square ABCD$

1.



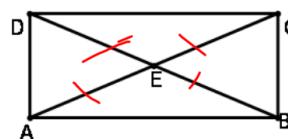
$$AD = 27 \quad BC = 27 \quad DC = 55 \quad AB = 55$$

$$AE = 35 \quad EC = 35 \quad DE = 26 \quad EB = 26$$

$$m\angle ABC = 110^\circ \quad m\angle BCD = 70^\circ$$

$$m\angle ADC = 110^\circ \quad m\angle BAD = 70^\circ$$

2.

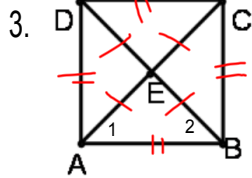


$$AD = 25 \quad BC = 25 \quad DC = 65 \quad AB = 65$$

$$AE = 35 \quad EC = 35 \quad DE = 35 \quad EB = 35$$

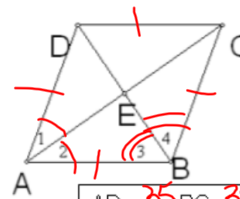
$$m\angle ABC = 90^\circ \quad m\angle BCD = 90^\circ$$

$$m\angle ADC = 90^\circ \quad m\angle BAD = 90^\circ$$



$AD = 30$ $BC = 30$ $DC = 30$ $AB = 30$
 $AE = 22$ $EC = 22$ $DE = 22$ $EB = 22$
 $m\angle ABC = 90^\circ$ $m\angle BCD = 90^\circ$
 $m\angle ADC = 90^\circ$ $m\angle BAD = 90^\circ$
 $m\angle 1 = 45^\circ$ $m\angle 2 = 45^\circ$

4.

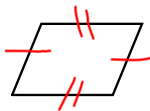


$AD = 35$ $BC = 35$ $DC = 35$ $AB = 35$
 $AE = 30$ $EC = 30$ $DE = 20$ $EB = 20$
 $m\angle ABC = 110^\circ$ $m\angle BCD = 70^\circ$
 $m\angle ADC = 110^\circ$ $m\angle BAD = 70^\circ$
 $m\angle 3 = 55^\circ$ $m\angle 1 = 35^\circ$
 $m\angle 4 = 55^\circ$ $m\angle 2 = 35^\circ$

Conclusions

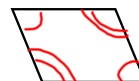
1. What can you conclude about the opposite sides of a parallelogram?

The opposite sides of a parallelogram are congruent.



2. What can you conclude about the opposite angles of a parallelogram?

The opposite angles of a parallelogram are congruent.

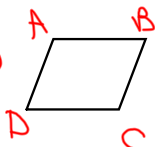


3. What can you conclude about the consecutive angles of a parallelogram?

The consecutive angles of a parallelogram are Supplementary
(compare $m\angle ABC$ & $m\angle BCD$)

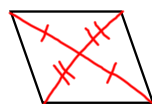
$$m\angle A + m\angle D = 180$$

$$m\angle A + m\angle B = 180$$



4. What can you conclude about the diagonals of a parallelogram?

The diagonals of a parallelogram bisect each other



5. What type of shape is #2? _____

Rectangle

6. What type of shape is #3? _____

Square

7. What type of shape is #4? _____

Rhombus

Open to p313
Look at 1-12
together

HW

p313-314

13-33